

WHAT IS CLAIMED IS:

1. An intraluminal medical device comprising multiple, independent, self-expanding stent segments, each stent segment including a plurality of longitudinal struts, a plurality of loops connecting adjacent struts, at least one bridging element and at least one receptacle, wherein the at least one bridging element of one or more of the stent segments is configured to be releasably engaged with the at least one receptacle on an adjacent stent segment.
2. The intraluminal medical device according to Claim 1, wherein the at least one bridging element comprises an elongate member extending from one of the plurality of loops and having a free end with a mating protrusion.
3. The intraluminal medical device according to Claim 2, wherein the at least one receptacle is configured as a space between adjacent longitudinal struts and defines a cavity for the elongate member and mating protrusion.
4. The intraluminal medical device according to Claim 3, wherein the cavity and the mating protrusion have a substantially oval shape.
5. The intraluminal medical device according to Claim 4, wherein the self-expanding stent segments comprise a superelastic alloy.
6. The intraluminal medical device according to Claim 5, wherein the superelastic alloy comprises from about fifty percent to about sixty percent Nickel and the remainder titanium.
7. The intraluminal medical device according to Claim 1, wherein the plurality of struts and the plurality of loops form a substantially S-shaped configuration.
8. The intraluminal medical device according to Claim 1, further comprising one or more radiopaque markers.

9. The intraluminal medical device according to Claim 8, wherein the one or more markers are incorporated into the mating protrusion.

5 10. A delivery system for a segmented, self-expanding stent comprising:

an outer sheath including an elongated tubular member having distal and proximal ends; and

10 an inner shaft located coaxially and slidably within the outer sheath, the inner shaft having a distal end and a proximal end, the shaft having a collar including mating sections for releasably securing at least a portion of the segmented, self-expanding stent.